

REMARKS

At the time of the Office Action dated January 23, 2006, claims 1-11 were pending in this application. In this Amendment, claims 1 and 9 have been amended, and claims 10 and 11 canceled. Care has been exercised to avoid the introduction of new matter. Claims 1 and 9 have been amended by incorporating the limitations from dependent claims 10 and 11, respectively. Applicant, therefore, submits that the present Amendment does not generate any new matter issue or any new issue for that matter and, hence, respectfully solicits entry pursuant to the provisions of 37 C.F.R. §1.116.

Claims 10 and 11 have been rejected under 35 U.S.C. §112, first paragraph.

Applicant notes that the rejection of claims 10 and 11 has been rendered moot by cancellation of these claims. However, since the limitations recited in claims 10 and 11 have been added to independent claims 1 and 9, Applicant will discuss why the limitations of claims 10 and 11 are supported by expressions (14) and (17) in the specification. It is noted that the limitation “among fields,” recited in claims 10 and 11 has not been added to claims 1 and 9.

Expression (14) represents a voltage of intermediate voltage VGM (the third voltage) in pixel 10 shown in Fig. 4 (see page 14, lines 14-29). According to expression (14), $VGM = VCOM$. Common voltage VCOM of common electrode node Nc is supplied as a constant DC voltage (see page 13, lines 8-9). Accordingly, it is apparent that intermediate voltage VGM is a DC voltage at a constant level.

Similarly, expression (17) represents a voltage of intermediate voltage VGM (the third voltage) in pixel 11 shown in Fig. 7 (see page 16, line 27 to page 17, line 5). According to expression (17), $VGM = (VCOMH + VCOML)/2$. In pixel 11, common voltage VCOM is

supplied as an AC voltage being set alternately to low voltage VCOML and high voltage VCOMH (see Fig. 7; and page 16, lines 16-21 of the specification). Accordingly, it is apparent that $(VCOMH + VCOML)/2$, that is, intermediate voltage VGM, is a DC voltage at a constant level.

Based on the foregoing, Applicant submits that the limitation “said third voltage is substantially at a constant level,” recited in claims 1 and 9 is supported by expressions (14) and (17). Applicant, therefore, respectfully solicits favorable consideration of claims 1 and 10.

Claims 1, 5-7 and 9-11 have been rejected under 35 U.S.C. §102(b) as being anticipated by Shimada et al.

The Examiner maintained his position on the rejection of claims 1, 5-7 and 9-11 under 35 U.S.C. §102(b) as evidenced by Shimada et al.

In response, Applicant has amended independent claim 1 to recite that “said third voltage is substantially at a constant level.” This amendment has been made to clarify that “the field-effect transistor” has its gate to be applied with “the third voltage” at a constant level, when the corresponding second gate line is in the non-select state (when the second field-effect transistor is turned off). By employing such voltage setting for the transistor on the pixel electrode side (corresponding to the “second field-effect transistor”), the voltage stress to a gate insulation film is alleviated to prevent gate leakage, and thus the operation reliability can be improved (page 15, lines 14-29 of the specification).

In contrast, in Fig. 7 of Shimada et al., at TFT 103b that corresponds to “the second field-effect transistor” in claim 1, the voltage applied to the gate in an off-period, i.e., the voltage in

“OFF-PERIOD” of gate bus line G(1, 2), is different between “FIRST FIELD” and “SECOND FIELD,” and is clearly not at a constant level.

Accordingly, it is submitted that Shimada et al. does not disclose a liquid crystal display apparatus including all the limitations recited in independent claim 1, as amended, within the meaning of 35 U.S.C. §102. The above discussion is applicable to independent claim 9 because the claim has also been amended to recite that “said third voltage is substantially at a constant level.” Dependent claims 5-7 are also patentably distinguishable over Shimada et al. at least because they respectively include all the limitations recited in independent claim 1. It is noted that the rejection of dependent claims 10 and 11 has been rendered moot by cancellation of those claims. Applicant, therefore, respectfully solicits withdrawal of the rejection of claims 1, 5-7 and 9 under 35 U.S.C. §102(b), and favorable consideration thereof.

Claims 2-4 and 8 have been rejected under 35 U.S.C. §103(a).

The Examiner asserted that claims 2-4 and 8 would have been obvious over the combination of Shimada and Morozumi et al., Kodan et al., Yumoto, or Kondo et al.

In response, Applicant submits that claims 2-4 and 8 are patentably distinguishable over the applied combination of the references, at least because the claims include all the limitations recited in independent claim 1. Morozumi et al., Kodan et al., Yumoto, and Kondo et al. do not teach a liquid crystal display apparatus recited in claim 1, and do not cure the deficiencies of Shimada et al. Withdrawal of the rejection of claims 2-4 and 8 under 35 U.S.C. §103 is respectfully solicited.

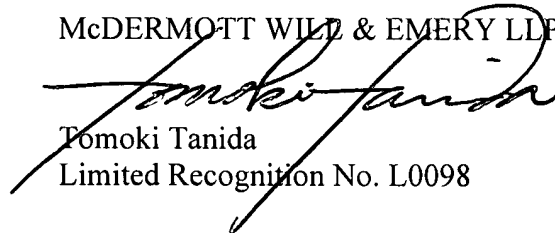
Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Tomoki Tanida', is written over the printed name and firm name.

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